











# JOURNAL OF ECONOMIC ENTOMOLOGY

OFFICIAL ORGAN AMERICAN ASSOCIATION OF ECONOMIC ENTOMOLOGISTS

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Second Annual Meeting, Champaign, Ill., Nov. 11-13, 1890. (The same officers had charge of this meeting.)

Third Annual Meeting, Washington, D. C., Aug. 17-18, 1891. President, James Fletcher; First Vice-President, F. H. Snow; Second Vice-President, Herbert Osborn; Secretary, L. O. Howard.

Fourth Annual Meeting, Rochester, N. Y., Aug. 15-16, 1892. President, J. A. Lintner; First Vice-President, S. A. Forbes; Second Vice-President, J. H. Comstock; Secretary, F. M. Webster.

Fifth Annual Meeting, Madison, Wis., Aug. 14-16, 1893. President, S. A. Forbes; First Vice-President, C. J. S. Bethune; Second Vice-President, John B. Smith; Secretary, H. Garman.

Sixth Annual Meeting, Brooklyn, N. Y., Aug. 14-15, 1894. President, L. O. Howard; First Vice-President, John B. Smith; Second Vice-President, F. L. Harvey; Secretary, C. P. Gillette.

Seventh Annual Meeting, Springfield, Mass., Aug. 27-28, 1895. President, John B. Smith; First Vice-President, C. H. Fernald; Secretary, C. L. Marlatt.

Eighth Annual Meeting, Buffalo, N. Y., Aug. 21-22, 1896. President, C. H. Fernald; First Vice-President, F. M. Webster; Second Vice-President, Herbert Osborn; Secretary, C. L. Marlatt.

Ninth Annual Meeting, Detroit, Mich., Aug. 12-13, 1897. President, F. M. Webster; First Vice-President, Herbert Osborn; Second Vice-President, Lawrence Bruner; Secretary, C. L. Marlatt.

Tenth Annual Meeting, Boston, Mass., Aug. 19-20, 1898. President, Herbert Osborn; First Vice-President, Lawrence Bruner; Second Vice-President, C. P. Gillette; Secretary, C. L. Marlatt.

Eleventh Annual Meeting, Columbus Ohio, Aug. 18-19, 1899. President, C. L. Marlatt; First Vice-President, Lawrence Bruner; Second Vice-President, C. P. Gillette; Secretary, A. H. Kirkland.

Twelfth Annual Meeting, New York, N. Y., June 22-23, 1900. President Lawrence Bruner; First Vice-President, C. P. Gillette; Second Vice-President, E. H. Forbush; Secretary, A. H. Kirkland.

Thirteenth Annual Meeting, Denver, Colo., Aug. 23-24, 1901. President, C. P. Gillette; First Vice-President, A. D. Hopkins; Second Vice-President, E. P. Felt; Secretary, A. L. Quaintance.

Fourteenth Annual Meeting, Pittsburgh, Pa., June 27-28, 1902. President, A. D. Hopkins; First Vice-President, E. P. Felt; Second Vice-President, T. D. A. Cockerell; Secretary, A. L. Quaintance.

Fifteenth Annual Meeting, Washington, D. C., Dec. 26-27, 1902. President, E. P. Felt; First Vice-President, W. H. Ashmead; Second Vice-President, Lawrence Bruner; Secretary, A. L. Quaintance.

Sixteenth Annual Meeting, St. Louis, Mo., Dec. 29-31, 1903. President, M. V. Slingerland; First Vice-President, C. M. Weed; Second Vice-President, Henry Skinner; Secretary, A. F. Burgess.

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Twenty-second Annual Meeting, Boston, Mass., Dec. 28-29, 1909. President, W. E. Britton; First Vice-President, E. D. Ball; Second Vice-President, H. E. Summers; Secretary, A. F. Burgess.

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Twenty-fourth Annual Meeting, Washington, D. C., Dec. 27-29, 1911. President, F. L. Washburn; First Vice-President, E. D. Ball; Second Vice-President, R. H. Pettit; Secretary, A. F. Burgess.

Twenty-fifth Annual Meeting, Cleveland, Ohio, Jan. 1-3, 1913. President, W. D. Hunter; First Vice-President, T. J. Headlee; Second Vice-President, R. A. Cooley; Secretary, A. F. Burgess.

Twenty-sixth Annual Meeting, Atlanta, Ga., Dec. 31, 1913-Jan. 2, 1914. President, P. J. Parrott; First Vice-President, E. L. Worsham; Second Vice-President, Wilmon Newell; Secretary, A. F. Burgess.

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 Kuwana, S. I., Imperial Agricultural Experiment Station, Nishigahara, Tokio, Japan.  
 Lea, A. M., National Museum, Adelaide, South Australia.  
 Leonardi, Gustavo, R. Scuola di Agricoltura, Portici, Italy.  
 Lounsbury, Charles P., Department of Agriculture, Pretoria, Transvaal, South Africa.  
 Mally, C. W., Department of Agriculture, Cape Town, South Africa.  
 Marchal, Dr. Paul, 16 Rue Claude-Bernard, Paris, France.  
 Mokshetsky, Sigismond, Musée d'Histoire Naturelle, Simferopole, Crimea, Russia.  
 Mussen, Charles T., Hawkesbury Agricultural College, Richmond, New South Wales.  
 Nawa, Yashushi, Entomological Laboratory, Kyomachi, Gifu, Japan.  
 Newstead, Robert, University School of Tropical Medicine, Liverpool, England.  
 Porchinski, Prof. A., Ministère de l'Agriculture, Petrograd, Russia.  
 Porter, Carlos E., Casilla 2352, Santiago, Chili.  
 Pospelow, Dr. Walremer, Station Entomologique, Rue de Boulevard, No. 9, Kiew, Russia.  
 Reed, Charles S. Mendoza, Argentine Republic, South America.  
 Ritzema Bos, Dr. J., Agricultural College, Wageningen, Netherlands.  
 Rosenfeld, A. H., Estacion Experimental Agrícola, Tucuman, Argentina.  
 Sajo, Prof. Karl, Gödöllő-Veresegyház, Hungary.  
 Schöyen, Prof. W. M., Zoological Museum, Christiania, Norway.  
 Severin, Prof. G., Curator Natural History Museum, Brussels, Belgium.  
 Shipley, Prof. Arthur E., Christ's College, Cambridge, England.

- Silvestri, Dr. F., R. Scuola Superiore di Agricoltura, Portici, Italy.  
Theobald, Frederick V., Wye Court, Wye, Kent, England.  
Thompson, Rev. Edward H., Franklin, Tasmania.  
Tryon, H., Queensland Museum, Brisbane, Queensland, Australia.  
Urish, F. W., Victoria Institute, Port of Spain, Trinidad, West Indies.  
Vermorel, V., Station Viticole, Villefranche, Rhone, France.

## **THIRTIETH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF ECONOMIC ENTOMOLOGISTS**

*Pittsburgh, Pennsylvania, December 31, 1917, to January 1 and 2, 1918*

The thirtieth annual meeting of the American Association of Economic Entomologists will be held in the Assembly Room, Margaret Morrison Carnegie School, beginning December 31, 1917, and ending January 2, 1918.

Sessions will open at 10.00 a. m., Monday, December 31. The annual reports and reports of committees will be presented at that time and the annual address of the President will follow. The meeting of the general association will be continued at 1.30 p. m., Monday, December 31, at 10.00 a. m., Tuesday, January 1, and at 10.00 a. m. and 1.30 p. m., Wednesday, January 2. The final business will be transacted at the Wednesday afternoon session.

### **Sectional Meetings**

The meeting of the section on Apiculture will be held at 8.00 p. m., Monday, December 31, at which the regular business of the section will be transacted and a program of papers presented. The sessions of the section on Horticultural Inspection will be held at 1.30 and 8.00 p. m., Tuesday, January 1. At the evening session, moving pictures will be exhibited showing the different phases of the gipsy moth work which is being carried on by the United States Bureau of Entomology in New England.

### **Other Meetings**

The American Association for the Advancement of Science will meet December 28 to January 2. The Entomological Society of America will hold its annual meeting on Friday and Saturday, December 28 and 29. The annual address will be delivered by Prof. Vernon Kellogg, Saturday evening, December 29.

### **Hotel Headquarters**

Hotel headquarters for this Association have been secured at the William Penn Hotel, where a minimum rate of \$2.50 per day, on the European plan, has been secured. Members are urgently requested to secure reservation of rooms in advance, as the hotel facilities in

Pittsburgh will be severely taxed in order to accommodate visitors who are attending the convention.

### **Railroad Rates**

Information concerning railroad rates to the convention should be secured from the permanent secretary of the American Association for the Advancement of Science. This information can be obtained by addressing Dr. L. O. Howard, Permanent Secretary, Smithsonian Institution, Washington, D. C.

### **Official Buttons**

Official buttons for members of the Association will be furnished to all those who have paid dues for 1918. Applications for buttons should be made to the secretary at the time of the meeting.

### **Membership**

Application blanks for membership can be secured from the secretary, or from members of the committee on membership, and all applications should be made out, properly endorsed, and filed with the membership committee on or before January 1.

### **Program**

*Monday, December 31, 1917, 10.00 a. m.*

Report of the Secretary.

Report of the executive committee, by President R. A. Cooley.

Report of the employment bureau, by W. E. Hinds, Auburn, Ala.

Report of the committee on nomenclature, by Herbert Osborn, Columbus, Ohio.

Report of the committee on entomological investigations, by H. T. Fernald, Amherst, Mass.

Report of the committee on index of economic entomology, by E. P. Felt, Albany, N. Y.

Report of the committee on entomological work at the U. S. National Museum, by J. J. Davis, of West Lafayette, Ind.

Appointment of committees.

Miscellaneous business.

New business.

Annual address of the President, R. A. Cooley, Bozeman, Mont.

"Economic Entomology in the Service of the Nation."

#### READING OF PAPERS

"The Pink Bollworm (*Gelechia gossypiella*) in Egypt," by H. A. Ballou,  
Barbados, British West Indies. (15 minutes.)

"Taking Stock," by Walter C. O'Kane, Durham, N. H. (15 minutes.)  
The results of an inquiry intended to discover where we stand in knowledge of  
efficient control of the most serious insect pests.

"The Relation of the Systematist to the Economic Entomologist,"  
by Edmund H. Gibson, Washington, D. C. (5 minutes.)

"A Method of Graphically Illustrating the Distribution of Injury by  
an Insect Pest," by Frederick Z. Hartzell, Fredonia, N. Y.  
(12 minutes.) Lantern.

A study of the migration and spring feeding of *Haltica chalybea* with biometrical  
studies in distribution.

"Factors Influencing the Distribution of the Sugar Beet Root Louse,"  
by Asa C. Maxson, Longmont, Colo. (10 minutes.)

Description of the methods used and a summary of the results of a survey  
covering about 100,000 acres of the beet-growing territory of northern Colorado  
for the purpose of ascertaining the effect of previous crops, presence of  
host trees and other factors on the distribution of this pest in the territory  
surveyed.

"Texas Aphid Notes," by F. B. Paddock, College Station, Tex. (15  
minutes.)

Notes on collections and records to date with life-history notes on same species.

Adjournment.

#### Program

Monday, December 31, 1917, 1.30 p. m.

Discussion of the Presidential Address.

#### READING OF PAPERS

"Notes on Some Southwestern Buprestidæ," by H. E. Burke, Los  
Gatos, Calif. (10 minutes.)

Notes on the biology and economic importance of several species, especially  
those injurious to mesquite wood and posts.

"The Life History of the Strawberry Leaf-Roller, *Ancylis comptana*,"  
by R. L. Webster, Ames, Iowa. (10 minutes.)

- "Some Experiments on the Adult and Eggs of the Peach Borer, *Sanninoidea exitiosa*, Say., and Other Notes," by Alvah Peterson, New Brunswick, N. J. (15 minutes.) Lantern.

Response of the female during oviposition to certain common insecticides and other chemicals and the influence of various sprays on the hatching of the egg. Notes on use of tree protectors.

- "The Apple Ermine Moth in New York," by Percival J. Parrott, Geneva, N. Y. (7 minutes.) Lantern.

Imports in nursery stock from abroad and occurrence of species in bearing orchards.

- "Seasonal Irregularities of the Codling Moth," by Leroy Childs, Hood River, Ore. (10 minutes.)

Four years' observations in the Hood River Valley, Oregon.

- "Notes on Three Species of Apple Leaf-Hoppers," by Frank H. Lathrop, Corvallis, Ore. (10 minutes.)

Brief notes on *Empoasca mali*, *Empoasca unicolor*, *Empoasca rosea* at Geneva, N. Y. Includes life histories, habits, and transmission of fire-blight.

- "Notes on the Woolly Aphis," by George G. Becker, Fayetteville, Ark. (15 minutes.) Lantern.

On the interrelationships of the hosts elm, apple and *Crataegus*.

- "Notes on the Life-History of *Laspyresia molesta* Busck," by Philip Garman, College Park, Md. (10 minutes.) Lantern.

Additional facts in the life-history of the newly introduced fruit pest are given, together with the results of recent spraying tests.

- "Remarks on the Status of the Sweetened Poisoned Bait for Fruitflies in America," by Glenn W. Herrick, Ithaca, N. Y. (10 minutes.)

- "The Calcium Arsenates and Their Efficiency as Insecticides," by A. L. Lovett, Corvallis, Ore. (8 minutes.)

Two types of pure calcium arsenate have been prepared, and their chemical, physical and insecticidal properties studied. Unsafe alone but efficient when used with an excess of CaO or with lime sulfur.

- "The Influence of Molasses on the Adhesion of Arsenate of Lead," by Frederick Z. Hartzell, Fredonia, N. Y. (10 minutes.)

Preliminary report on a method of testing adhesion of sprays and especially the results when molasses is used as a bait.

- "Spreaders for Arsenate Sprays," by A. L. Lovett, Corvallis, Ore. (12 minutes.)

A number of materials have been tested as spreaders for arsenates. An efficient spreader will materially decrease the amount of poison necessary and decidedly increase its effectiveness.

"A Study of the Toxicity of Kerosene," by William Moore, St. Paul, Minn. (10 minutes.)

Chemical composition and physical characteristics of different brands of kerosene, and influence on the death of the insects and liability to "burn" plants.

"Certain Principles Governing the Value of Ether Soluble Compounds as Contact Insecticides," by William Moore and S. A. Graham, St. Paul, Minn. (10 minutes.)

Manner of penetration into the insect body of various ether soluble chemicals and the chemical and physical properties influencing this penetration.

"Some Further Facts on Low Atmospheric Humidity as an Insecticide," by Thomas J. Headlee, New Brunswick, N. J. (15 minutes.) (To be read by title.)

"Insecticide Tests with *Diabrotica vittata*," by Neale F. Howard, Madison, Wis. (10 minutes.)

- Results of cage tests with several stomach poisons during past two seasons at Madison, Wis.

"The Imported Cabbage Worm in Wisconsin," by H. F. Wilson and L. G. Gentner, Madison, Wis. (10 minutes.)

"Some Root Maggots," by O. A. Johannsen, Ithaca, N. Y. (10 minutes.)

"Poisoned Bait Experiments with the Onion Maggot," by Neale F. Howard, Madison, Wis. (10 minutes.)

Brief statement of results obtained in two seasons at Green Bay, Wis.

"Notes on the Biology of the Angoumois Grain Moth," by J. L. King, Harrisburg, Pa. (15 minutes.) Lantern.

Brief description of life cycle and egg laying habits of the first generation of moths which attack the grain in the field.

"Studies on the Life-Histories of Two Kansas Scarabæidæ," by William P. Hayes, Manhattan, Kan. (10 minutes.)

A report on the life histories of a species of *Cyclocephala* and a species of *Anomala*.

"An Emergence Response of *Trichogramma minutum* Riley to Light," by George N. Wolecott, Utica, N. Y. (10 minutes.)

Adults of the Hymenopteron, *Trichogramma minutum*, normally emerge from one to two hours after sunrise, but when kept in darkness, more than six times as many emerge in the first hour after being exposed to daylight, as emerge in the dark per hour of previous daylight in the same day.

Adjournment.



## SECTION ON APICULTURE

B. N. GATES, *Chairman*.N. E. SHAW, *Secretary*.

## Program

*Monday, December 31, 8.00 p. m.*

Address by the Chairman, B. N. Gates.

## READING OF PAPERS AND DISCUSSIONS

"Important Factors in the Spread and Control of American Foul Brood," by E. D. Ball.

"Extension Methods in Apicultural Work," by G. H. Cale.

"An Unusual Disease of the Honey Bee," by Elmer G. Carr.

"Foul Brood Eradication Work in Texas," by F. B. Paddock.

"Missouri Beekeeping," by Leonard Haseman.

"Opportunities and Rewards in American Beekeeping," by E. R. Root.

## AMERICAN ASSOCIATION OF ECONOMIC ENTOMOLOGISTS

## Program

*Tuesday, January 1, 10.00 a. m.*

The session will be opened by a paper by E. P. Felt on "Insects and Camp Sanitation." At the conclusion, this subject will be opened for discussion. It is hoped that all the members will come prepared to express their views on this important matter.

"How Can the Entomologist Assist in Increasing Food Production?"

Every past president of the Association, who is present, will be given not to exceed 5 minutes to discuss this important subject. A general discussion will then follow.

Adjournment.

# SECTION OF HORTICULTURAL INSPECTION

G. M. BENTLEY, *Chairman.*

J. G. SANDERS, *Secretary.*

The Federal Horticultural Board and Committees of The American Association of Nurserymen, and of the Society of American Florists and Ornamental Horticulturists have been invited to attend the sessions.

## Program

*Tuesday, January 1, 1.30 p. m.*

Address by the Chairman, G. M. Bentley.

"Devastation by Imported Plant Pests Shows the Need of Quarantine against Foreign Plant Introduction," by J. G. Sanders, Harrisburg, Pa.

Discussion.

Adjournment.

## Program

*Tuesday, January 1, 8.00 p. m.*

Selection of officers.

"The Control of Imported Pests Recently Found in New Jersey," by H. B. Weiss, New Brunswick, N. J.

"The Work of the Missouri Inspection Service," by L. Haseman, Columbia, Mo.

Moving Pictures of Gipsy Moth Work in New England, Conducted by the U. S. Bureau of Entomology.

Adjournment.

## AMERICAN ASSOCIATION OF ECONOMIC ENTOMOLOGISTS

## Program

*Wednesday, January 2, 10.00 a. m.*

## READING OF PAPERS

"Entomological Extension Work in Pennsylvania," by C. H. Hadley,  
State College, Pa. (15 minutes.) Lantern.

Discussion of the organization, scope, and general conditions characterizing  
the work in this state.

"Planning a State Extension Project in Entomology," by T. H. Parks,  
Manhattan, Kan. (15 minutes.)

Planning the work and working the plan.

"Municipal Control of the Spring Canker Worm," by S. J. Hunter,  
Lawrence, Kan. (15 minutes.) Lantern.

An account of the methods employed and the results obtained by the city com-  
missioners of Lawrence, Kan., in checking a serious out-break of the spring  
canker worm.

"Notes on Fumigation of Orchids," by E. R. Sasseer and H. F. Dietz,  
Washington, D. C. (15 minutes.) Lantern.

Dealing primarily with the fumigation of orchids at the ports of entry under  
vacuum conditions,—also including a list of orchid insects.

"*Mira saltator* Lindm. as a Parasite of the Hessian Fly," by W. R.  
McConnell, Carlisle, Pa. (10 minutes.)

Notes on the life history of a parasite originally described from Russia but not  
recorded from this country.

"Grasshopper Observations, Experiments and Demonstrations in  
Arizona, During 1917," by A. W. Morrill, Phoenix, Ariz. (10  
minutes.)

Report of observations on feeding habits and injuriousness of differential grass-  
hopper and of experiments and demonstrations with poisoned baits against  
this and other species.

"A New Method of Combatting the Chinch-Bug," by W. P. Flint,  
Springfield, Ill. (10 minutes.)

Results of experiments conducted during the summer of 1917 using soluble  
poisons to kill chinch-bugs.

"Fluctuations of the Clover Aphis Epidemic in South Idaho," by A. C.  
Burrill, Moscow, Ida. (5 minutes.)

"Notes on the False Wireworm (*Eleodes*) with Special Reference to *Eleodes tricolorata*," by James W. McColloch, Manhattan, Kan. (15 minutes.)

A review of the economic literature of the genus *Eleodes* and the life-history of *Eleodes tricolorata*.

Adjournment.

### Program

Wednesday, January 2, 1.30 p. m.

#### READING OF PAPERS

"Mosquitoes and the Control of Malarial Fever in Missouri," by L. Haseman, Columbia, Mo. (10 minutes.)

This project is just getting under way and the paper will discuss more in particular the field open and plans of procedure. It is hoped that it will call forth helpful suggestions from other workers on mosquitoes and malarial fever.

"Mosquitoes of Colorado," by T. D. A. Cockerell, Boulder, Colo. (10 minutes.)

A brief account of the work done this year toward a mosquito survey of Colorado. Discussion of the mosquito problem in relation to recuperation camps.

"Mosquito Flight as a Factor in the Problem of Control," by Thomas J. Headlee, New Brunswick, N. J. (15 minutes.) Lantern.

The flight of fresh as well as of salt marsh species determines the methods used in controlling them. Extensive flight of certain salt marsh species was demonstrated some years ago; considerable flights of certain malarial species have been recently shown; now the house mosquito and the fresh-water swamp species are known to migrate. The occasion for flight is probably a certain complex of climatic factors and other causes.

"Some Results of Two Years' Investigations of *Dermacentor venustus* Banks in Eastern Montana," by R. R. Parker, Bozeman, Mont. (15 minutes.) Lantern.

Dealing with new ecological data.

"Sodium Fluoride—A Specific for Biting Lice," by F. C. Bishopp and H. P. Wood, Dallas, Tex. (15 minutes.)

A discussion of the use of sodium fluoride against Mallophaga on livestock, poultry and birds.

"Control of Lice on Pigeons," by H. P. Wood, Dallas, Tex. (10 minutes.)

Deals with the control of the lice which infest pigeons.

**"The Chigger-Mites Affecting Man and Domestic Animals,"** by H. E. Ewing, Ames, Ia. (10 minutes.)

The known species of chigger-mites reported from man and domestic animals considered from standpoints of synonymy, economy and biology.

**"Missouri Scale Insects (Coccidæ) and Their Host Plants,"** by A. H. Hollinger, Columbia, Mo. (10 minutes.)

An economic discussion of Coccidæ and the degree of infestation of the host plants, together with a cross check list of the Coccidæ and the plant species in the form of a chart or table.

#### FINAL BUSINESS

Report of committee on auditing.

Report of committee on resolutions.

Report of committee on membership.

Report of other committees.

Nomination of JOURNAL officers by advisory committee.

Report of committee on nominations.

Election of officers.

Miscellaneous business.

Fixing the time and place of next meeting.

Final adjournment.

R. A. COOLEY, *President*,  
Bozeman, Mont.

A. F. BURGESS, *Secretary*,  
Melrose Highlands, Mass











# JOURNAL OF ECONOMIC ENTOMOLOGY

OFFICIAL ORGAN AMERICAN ASSOCIATION OF ECONOMIC ENTOMOLOGISTS

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No. 1

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## **Proceedings of the Twenty-Ninth Annual Meeting of the American Association of Economic Entomologists**

The twenty-ninth annual meeting of the American Association of Economic Entomologists was held in the Teachers' College, Columbia University, New York City, December 28 to 30, 1916. The first session was held at 10 a. m., Thursday, December 28, when the annual reports of the officers of the Association were given. Owing to the illness of President Hewitt, his address was not delivered until Friday, December 29.

The meeting of the Section on Apiculture was held at 8 p. m., December 28, at the New York Museum of Natural History. The meeting of the Section on Horticultural Inspection was held at 2 p. m., December 29, at the Teachers' College at Columbia University and an evening session at the American Museum of Natural History.

The business proceedings of the Association are given as Part I of this report, and the addresses, papers, and discussions will be found in Part II. The proceedings of the sections will be prepared by the section secretaries and published as parts of this report.

The attendance was the largest of any meeting which has been held by the Association, and a very crowded and interesting program was given.

### **PART I. BUSINESS PROCEEDINGS**

The meeting was called to order by First Vice-President George A. Dean at 10.15 a. m., Thursday, December 28, 1916. About 200 members and visitors attended this session. The following members were present.

- Ackerman, A. J., Washington, D. C.  
 Ainslie, George G., Knoxville, Tenn.  
 Allen, H. W., Melrose Highlands, Mass.  
 Atwood, George G., Albany, N. Y.  
 Back, E. A., Washington, D. C.  
 Backus, H. E., North East, Pa.  
 Bailey, I. L., Northboro, Mass.  
 Ball, E. D., Madison, Wis.  
 Becker, G. G., Fayetteville, Ark.  
 Bentley, G. M., Knoxville, Tenn.  
 Beutenmuller, Wm., Bronx, N. Y.  
 Beyer, A. H., Columbia, S. C.  
 Bilsing, S. W., College Station, Texas.  
 Blackman, M. W., Syracuse, N. Y.  
 Bradley, J. W., Melrose Highlands, Mass.  
 Britton, W. E., New Haven, Conn.  
 Burgess, A. F., Melrose Highlands, Mass.  
 Clapp, S. C., Raleigh, N. C.  
 Cockerell, T. D. A., Boulder, Colo.  
 Collins, C. W., Melrose Highlands, Mass.  
 Cook, Mel. T., New Brunswick, N. J.  
 Cooley, R. A., Bozeman, Mont.  
 Cory, E. N., College Park, Md.  
 Crampton, G. C., Amherst, Mass.  
 Crawford, J. C., Washington, D. C.  
 Crosby, C. R., Ithaca, N. Y.  
 Crossman, S. S., Melrose Highlands, Mass.  
 Culver, J. J., Melrose Highlands, Mass.  
 Davis, I. W., New Haven, Conn.  
 Davis, J. J., Lafayette, Ind.  
 Dean, George A., Manhattan, Kan.  
 Dickerson, E. L., Nutley, N. J.  
 Dohanian, S. M., Melrose Highlands, Mass.  
 Eddy, M. W., State College, Pa.  
 Engle, E. B., Harrisburg, Pa.  
 Felt, E. P., Albany, N. Y.  
 Fenton, F. A., W. Lafayette, Ind.  
 Fernald, H. T., Amherst, Mass.  
 Fink, D. E., Norfolk, Va.  
 Fiske, R. J., Washington, D. C.  
 Fulton, B. B., Geneva, N. Y.  
 Garman, Philip, College Park, Md.  
 Gates, B. N., Amherst, Mass.  
 Gates, F. H., Tempe, Ariz.  
 Gibson, E. H., Alexandria, Va.  
 Glasgow, Hugh, Geneva, N. Y.  
 Gossard, H. A., Wooster, Ohio.  
 Gram, Ernst, Ithaca, N. Y.  
 Hadley, Charles H., Jr., State College, Pa.  
 Harned, R. W., Agricultural College, Miss.  
 Hawley, I. M., Indianapolis, Ind.  
 Headlee, T. J., New Brunswick, N. J.  
 Hertzog, P. M., Hightstown, N. J.  
 Herrick, Glenn W., Ithaca, N. Y.  
 Hewitt, C. Gordon, Ottawa, Canada.  
 Hinds, W. E., Auburn, Ala.  
 Hine, J. S., Columbus, Ohio.  
 Hood, C. E., Melrose Highlands, Mass.  
 Hopkins, A. D., Washington, D. C.  
 Houser, J. S., Wooster, Ohio.  
 Howard, C. W., St. Paul, Minn.  
 Howard, L. O., Washington, D. C.  
 Howard, N. F., Madison, Wis.  
 Hungerford, H. B., Ithaca, N. Y.  
 Hyslop, J. A., Hagerstown, Md.  
 Jennings, A. H., Washington, D. C.  
 Jones, D. W., Melrose Highlands, Mass.  
 King, J. L., Cleveland, Ohio.  
 Kisliuk, Max, Jr., Washington, D. C.  
 Kelly, E. O. G., Wellington, Kan.  
 Kotinsky, J., Washington, D. C.  
 Lamson, G. H., Jr., Storrs, Conn.  
 Larrimer, W. H., Charleston, Mo.  
 Lathrop, F. H., Columbus, Ohio.  
 Leiby, R. W., Raleigh, N. C.  
 Leonard, M. D., Ithaca, N. Y.  
 Lowry, Q. S., New Haven, Conn.  
 Manter, J. A., Storrs, Conn.  
 Marcovitch, Simon, St. Paul, Minn.  
 Marlatt, C. L., Washington, D. C.  
 Martin, J. F., Amherst, Mass.  
 Maxon, Aea C., Longmont, Colo.  
 McColloch, J. W., Manhattan, Kan.  
 McDonough, F. L., Clarksville, Tenn.  
 McLaine, L. S., Ottawa, Canada.  
 Merrill, G. B., Gainesville, Fla.  
 Merrill, J. H., Manhattan, Kan.  
 Metcalf, Z. P., W. Raleigh, N. C.  
 Minott, C. W., Hudson, Mass.  
 Morrison, Harold, Washington, D. C.  
 Morse, A. P., Wellesley, Mass.  
 O'Kane, W. C., Durham, N. H.  
 Osborn, Herbert, Columbus, Ohio.  
 Osgood, W. A., Durham, N. H.  
 Parrott, P. J., Geneva, N. Y.  
 Patch, Edith M., Orono, Me.  
 Peterson, Alvah, New Brunswick, N. J.  
 Phillips, E. F., Washington, D. C.  
 Phillips, Saul, Beverly, Mass.  
 Phillips, W. J., Charlottesville, Va.

Plank, H. K., Washington, D. C.	Smulyan, M. T., Blacksburg, Va.
Quaintance, A. L., Washington, D. C.	Stockwell, C. W., Melrose Highlands, Mass.
Rane, F. W., Boston, Mass.	Tower, D. G., Washington, D. C.
Reeves, George L., Salt Lake City, Utah.	Turner, W. F., Vienna, Va.
Regan, W. S., Amherst, Mass.	Viereck, H. L., Washington, D. C.
Richardson, C. H., New York City.	Wade, Joe S., Wellington, Kan.
Riley, W. A., Ithaca, N. Y.	Walden, B. H., New Haven, Conn.
Rockwood, L. P., Forest Grove, Ore.	Washburn, F. L., St. Anthony Park, Minn.
Rogers, D. M., Boston, Mass.	Webber, R. T., Melrose Highlands, Mass.
Sanders, J. G., Harrisburg, Pa.	Webster, R. L., Ames, Iowa.
Sanford, H. L., Washington, D. C.	Weiss, H. B., New Brunswick, N. J.
Sasser, E. R., Washington, D. C.	Wheeler, W. M., Forest Hills, Mass.
Satterthwait, A. F., Lafayette, Ind.	Wolcott, G. N., Champaign, Ill.
Scammell, H. B., Washington, D. C.	Woods, W. C., Orono, Me.
Schaffner, J. V., Jr., Dover, Mass.	Wooldridge, Reginald, Melrose Highlands, Mass.
Seigler, E. H., Washington, D. C.	Worsham, E. L., Atlanta, Ga.
Shaw, N. E., Columbus, Ohio.	Worthley, L. H., Melrose Highlands, Mass.
Shelford, V. E., Urbana, Ill.	Zappe, Max P., New Haven, Conn.
Sherman, Franklin, Jr., Raleigh, N. C.	
Simanton, F. L., Washington, D. C.	
Skinner, Henry, Philadelphia, Pa.	
Smith, G. A., Boston, Mass.	
Smith, H. E., W. Springfield, Mass.	

VICE-PRESIDENT GEORGE A. DEAN: The meeting will please come to order. I am sorry to announce that Dr. Hewitt, President of the Association, is ill, but we hope he will be able to be present at a later session. The first business on the program is the report of the Secretary.

#### REPORT OF THE SECRETARY

The total membership of the Association at the time of the last annual meeting was 454, divided as follows: active 135, associate 267, and foreign 52. At that meeting one active member resigned, one was transferred to associate membership; five associate members resigned and seven were transferred to active membership; and 31 associate members were elected.

During the year, three active members have died and three active and five associate members have been dropped from the rolls. The deaths have been announced of two foreign members, Andrew Rutherford and Prof. Sven Lampa. The membership at present is 466, consisting of active 134, associate 282, and foreign 50, a net gain for the year of 12.

During the last meeting, held at Columbus, members of the Association were greatly shocked to learn of the severe illness of Prof. F. M. Webster, who had been present at the early sessions. He was taken to the hospital at Columbus, Ohio, and died January 3, 1916. Professor Webster was one of the original members of the Association and was well known and highly respected by all entomologists. On March 23, 1916, Mr. Theodore Pergande, one of the pioneer members of the Bureau of Entomology, died at Washington, D. C., and on November 18, 1916, Mr. Otto Heidemann of the same Bureau died after a brief illness. These three men were among the oldest members of the Association. Their loss has been severely felt by the Bureau of Entomology and indirectly by the entomologists of this country.

The Pacific Slope Branch which came into existence through the action taken at the last annual meeting held its annual meeting August 9-10, 1916, at San Diego, California, in connection with the meetings of the Pacific Coast Branch of the American Association for the Advancement of Science. The report of the sessions was published in the October number of the JOURNAL and speaks for itself as to the success of the branch and as to the wisdom of its establishment. Mr. E. O. Essig, the secretary, has been very successful in handling the new branch and most pleasant relations exist between it and this Association.

The finances of the Association are in such a condition that the publication of the Index of American Economic Entomology can be undertaken if a reasonable number of advance subscriptions can be secured.

#### THE JOURNAL OF ECONOMIC ENTOMOLOGY

The JOURNAL has had a satisfactory year although the financial balance is somewhat less than last year. The complete proceedings of the Columbus meeting were published in the February issue, but it was impossible to mail this number until March 4. This number contained 252 pages in addition to the list of officers, meetings and members which is published each year.

In spite of this fact, the other numbers during the year were not materially reduced in size; 580 pages were published in 1916 against 566 for the previous year. The number of illustrations appearing in the JOURNAL is increasing rapidly each year, which means additional cost both for their preparation and printing. Members are urged to submit only such illustrations as are vital to the proper understanding of the papers which they wish published. The JOURNAL management will sell to authors at cost the cuts prepared for illustrating their papers and it is hoped that many of these can be disposed of in this way, as it will supply more funds for improving the publication.

The cost of issuing the JOURNAL has increased during the past year. A contract has been signed for 1917 at a further advance. The price of paper and nearly everything that has to do with the publication has increased in price, and the expense next year will be approximately one-third greater than heretofore. The advertising in the JOURNAL has decreased slightly as the manager has not felt warranted in pushing an aggressive campaign to sell space. Most of our old advertisers have remained without being persistently solicited, which speaks well for the publication as an advertising medium.

The report last year showed that the net increase in the subscription list was 44, and although many foreign subscriptions were cancelled there was a net gain of three in that class of subscribers. As anticipated the record of the past year has been less favorable and the future does not look encouraging. Total subscriptions for 1916 show 11 less than the previous year. There was an increase in the United States but a loss of 21 foreign subscribers was responsible for the unfavorable showing. In all probability, we will have less foreign business during the coming year. This means one of three things: an increase in price of the publication, which is now selling much lower than others of the same grade and size; the publication of less matter; or more interest among the members in securing additional subscribers. It should be an easy matter to solve the problem in the latter way. During the past year, several members have done good work in this respect. A little more energy in securing one more subscription to the JOURNAL will solve the problem.

## ASSOCIATION STATEMENT

Balance in Treasury, December 23, 1915 . . . . .	\$621.31	
By amount received for dues, 1916 . . . . .	457.00	
By amount received from interest on deposits . . . . .	5.86	
To stenographic report 1915 meeting . . . . .	\$58.00	
Buttons 1915 meeting . . . . .	14.66	
Stamps and stamped envelopes . . . . .	29.42	
Printing programs, blanks, etc. . . . .	78.25	
Telegraph and express . . . . .	2.73	
Miscellaneous supplies . . . . .	8.13	
Pacific Slope Branch expenses . . . . .	15.23	
Official seal . . . . .	12.00	
Clerical work, Secretary's office . . . . .	38.00	
One-half salary of Secretary . . . . .	50.00	
	<hr/>	
	\$306.42	
Balance, December 20, 1916 . . . . .	777.75	
	<hr/>	
	\$1,084.17	\$1,084.17

## Balance deposited as follows:

Melrose Savings Bank . . . . .	\$151.32
Malden National Bank . . . . .	626.43

## JOURNAL STATEMENT

Balance in Treasury, December 23, 1915 . . . . .	\$755.02	
By amount received for subscriptions, advertising, etc., 1916 . . . . .	2,281.07	
To stamps and stamped envelopes . . . . .	\$24.74	
Printing . . . . .	1,784.58	
Halftones, etc. . . . .	273.94	
Miscellaneous supplies . . . . .	20.86	
Refunds on subscriptions . . . . .	2.60	
Returned checks . . . . .	7.50	
Clerical work, Editor's office . . . . .	70.00	
Clerical work, Secretary's office . . . . .	55.00	
Salary, Editor . . . . .	100.00	
One-half salary of Secretary . . . . .	50.00	
	<hr/>	
	\$2,389.22	
Balance, December 21, 1916 . . . . .	646.87	
	<hr/>	
	\$3,036.09	\$3,036.09

Deposited in Malden National Bank \$646.87

Respectfully submitted,

A. F. BURGESS, *Secretary*.

On motion the report was accepted, and the financial part referred to the auditing committee.

VICE-PRESIDENT GEORGE A. DEAN: We will now hear the report of the executive committee.

## REPORT OF THE EXECUTIVE COMMITTEE

The Executive Committee has pleasure in announcing that the question of a seal has been settled in accordance with the wishes of the Association and the instructions received at the last meeting. The committee was empowered to select either a plain seal or one bearing a profile of Harris and to have the seal prepared for official use. Under the direction of the President a design was made which included a profile of Harris, and the seal which has now been cut and completed is submitted for inspection. It is hoped that the result will meet with the approval of the members of the Association.

The President and Trustees of the Rutgers College of New Brunswick, N. J., invited the Association to send a delegate to the celebration of the 150th anniversary of the founding of the college which was held at New Brunswick, N. J., on October 13 to 15. Accordingly the President appointed Mr. P. J. Parrott of Geneva, N. Y., to represent the Association on this occasion. Mr. Parrott attended the celebration and has submitted an interesting account of the Proceedings; his report is included in the records of the Association.

C. GORDON HEWITT,  
E. D. BALL,  
W. J. SCHOONE,  
T. J. HEADLEE,  
A. F. BURGESS,  
*Executive Committee.*

By vote of the Association the report was adopted.

VICE-PRESIDENT GEORGE A. DEAN: The report of the Employment Bureau is now in order.

## ANNUAL REPORT OF ENTOMOLOGISTS' EMPLOYMENT BUREAU

December 26, 1916.

The Entomologists' Employment Bureau, organized five years ago, seeks to interest and help in the most impartial and impersonal manner possible, both employers and employees in the field of entomology. Its policy, under the present administration, has been, therefore, simply to bring together candidates seeking positions in various phases of entomological work and those employers who are responsible for the recommendations or appointments to such positions. When information concerning a possible position comes to the attention of the Bureau, it has been the practice to furnish to the employer a list of several names of such men as appear from their enrollment blanks to be best fitted for the position in question and possibly available for the appointment. An abstract of the principal points given on the enrollment blank with the names of parties to whom the candidate refers for additional information is furnished the employer for each name. (Copies of the forms used may be obtained on application.) It is expected that the employer should then select and communicate with such candidates as he desires to investigate further. Notice is also sent to each candidate whose name has been thus used, giving him notice of the reference so that he can, if he so desires, get into direct communication with the employer and learn full details regarding the position, and present complete and up-to-date information regarding his own qualifications for appointment.

During the calendar year 1916, twenty-two new names have been enrolled in the Bureau. Two men have received the total of 10 references offered by the Bureau for the enrollment fee of \$2, and one of these has re-enrolled. The total number on the roll at present is 63.

Information has come to the Bureau regarding twenty-one openings, and among these, nine men suggested by the Bureau have been definitely placed, with eight more from which we have not yet heard because of recent notifications. One hundred sixty-one (161) names have been suggested to these possible employers for their further consideration and selection of such candidates as seem to be best fitted for the particular work desired. Nearly five hundred (500) letters have been sent out during the year.

During the five years that the Bureau has existed, it appears that a total of ninety-five (95) men have enrolled and at least twenty-five appointments have resulted through the services of the Bureau. This number is doubtless considerably less than the actual number of appointments, since it frequently happens that no direct information regarding the appointment is given to the Bureau.

An effort has been made this year to secure a general expression of opinion from employers and employees as to the value of the Bureau services to them, and also to bring out frankly whatever criticism might be made regarding the work of the Bureau and as a guide in future policy. Thirty-four (34) men have responded with their opinions regarding the Bureau. Of the employers, nine have found the Bureau of service to them; seven have had no occasion to use the Bureau; one expressed the opinion that there is "no field for the Bureau," although he had had no occasion to try it; no employer has expressed condemnation of either the policy or services offered by the Bureau.

Among the candidates for appointments, fourteen (14) have expressed appreciation of the helpful services rendered them, in some cases even where a change of position has not occurred. Three have expressed the feeling that the information furnished them by the Bureau has been too meager to be satisfactory. (It should be noted here that the information upon which the Bureau works is always meager, and this is one reason why it has been expected that employer and employee should correspond directly for complete information. A revised form of notification cards would make this point entirely clear.) Three (3) men seem to feel that it is a fault in the Bureau because information regarding various positions has come to them through other sources, at the same time some of the same men admit that they have not informed the Bureau regarding such openings, even where they have not considered them seriously themselves. We would suggest in this connection that the Bureau may be of much greater service if it can receive hearty coöperation from all members of the Association of Economic Entomologists.

Financial statement of the Bureau is presented herewith:

	Dr.	
Cash on hand January 1, 1916.....	\$48.70	
To 22 enrollment fees at \$2.....	44.00	
Total receipts.....		\$92.70
	Cr.	
April 11, 1916, to multigraphing letters (voucher 1).....	\$1.00	
April 30, 1916, stenographic work (voucher 2).....	10.00	
September 30, 1916, to stenographic work (voucher 7).....	5.00	
November 24, 1916, to multigraphing letter (voucher 3).....	1.25	
December 26, 1916, to stenographic work (voucher 4).....	7.50	
December 26, 1916, to 500 envelopes (voucher 5).....	2.40	
December 26, 1916, to stamps (voucher 6).....	10.00	
Total.....		37.15
Balance cash on hand, Bank of Auburn, Ala., December 26, 1916 ..		\$55.55
W. E. HINDS, In Charge.		



NEW YORK, N. Y., December 28, 1916.

We have examined this statement and have found it to be correct.

W. E. BRITTON,  
R. A. COOLEY,  
*Auditors.*

By vote of the Association the report was adopted and the financial report referred to the auditing committee.

VICE-PRESIDENT GEORGE A. DEAN: We will now hear the report of the committee on nomenclature, Mr. Herbert Osborn.

The committee on nomenclature had no formal report to offer at this meeting.

VICE-PRESIDENT GEORGE A. DEAN: Next in order is the report of the committee on entomological investigations.

MR. W. E. HINDS: Last year no report of the committee on entomological investigations was published. Owing to a misunderstanding I did not know that it was necessary for me to prepare the report this year, hence the inquiries in regard to obtaining the information was sent out rather late in the season. As a result, replies have been received from only a part of the members to whom letters were written. As soon as full replies are received the matter can be turned over to the JOURNAL for printing, if it is the wish of the Association that it be handled in this way.

MR. E. P. FELT: I do not wish to be considered as in any way criticising the committee, but I would like to raise the question at this time as to the actual value which the members receive from the publication of this report, and whether it is the intention to publish the projects of the United States Bureau of Entomology. In the past, they have been issued as a government publication, and it would not seem desirable to duplicate them in the JOURNAL.

MR. W. E. HINDS: I would be very glad to have an expression of opinion from the members as to the value of the reports of the committee on entomological investigations. Under the present arrangement, these must be rather lengthy if they are to be at all complete. It is not the intention, however, to publish the projects of the Bureau of Entomology.

MR. W. C. O'KANE: A few years ago there was some discussion as to the advisability of publishing this report once in two or three years instead of annually. I believe myself that it should be published once in a while. If some of the remarks under the projects were cut out, I think it would make the report somewhat shorter and perhaps just as valuable.

MR. T. J. HEADLEE: It seems to me these reports are valuable, but

they should be available before the meeting in order that a member may have an opportunity to consult with other members working on the same lines, at the time of the annual meeting. If mimeograph copies of the report were available at the meeting, I think it would be very helpful as it would give an opportunity for the members to talk over these matters.

A general discussion followed as to the best form for presenting the report, and, on motion, the matter was referred back to the committee with a request that the suggestions be considered and recommendations reported at the last session of the meeting.

VICE-PRESIDENT GEORGE A. DEAN: We will now have the report of the committee on index of economic entomology.

#### REPORT OF THE COMMITTEE ON THE PUBLICATION OF THE INDEX OF AMERICAN ECONOMIC ENTOMOLOGY

Through the cooperation of Dr. L. O. Howard, chief of the U. S. Bureau of Entomology, and the devoted labor of Dr. Nathan Banks, the completed manuscript of the Index of American Economic Entomology is in the hands of the chairman of the committee. We regret to state that it has not been possible to secure the publication of this extremely valuable compilation by the U. S. Bureau of Entomology, though a very special effort was made on behalf of the project.

Previous action authorized the committee and the Secretary of the Association, who is also a member of the committee, to proceed with the publication of this work in the event of its being impossible to find any other satisfactory publishing agency. The latter has proved to be the case. The freedom of the committee was limited, however, by the adoption of a motion at the Atlanta meeting providing for the fixing of the maximum price of copies by the Association. The manuscript has been held since last September and the committee has limited itself to obtaining figures and considering details.

The printer's charges for an edition of 1,000 cloth bound copies in 8-point type would approximate very closely to \$1,300 and in addition there would be some expense for author's corrections, the proofreading of the 350 pages in the editor's office, postage, etc. These latter are relatively small items. We prefer not to count on selling more than 200 copies at the outset though the probabilities are good that a much larger number can be sold within a five-year period.

*The committee recommends that the editorial board of the JOURNAL OF ECONOMIC ENTOMOLOGY be authorized to proceed with the publication of the index and further, that the price of the index be fixed by the Editorial Board.*

Furthermore, we recommend that the committee on the index be continued and specially charged with providing for the indexing of subsequent literature with a view to its publication later.

Respectfully submitted,

E. P. FELT,  
W. C. O'KANE,  
W. E. BRITTON,  
A. F. BURGESS,  
W. E. HINDS,  
*Committee.*

MR. E. P. FELT: I would call attention to the fact that two different propositions are embodied in this report. The first—to give the editorial board of the JOURNAL authority to publish the index and to fix the price; second—to continue the committee in order to have indexing of current publications kept up to date, so that another index can be published as soon as it is deemed advisable. The committee believes that it will be possible to arrange with Dr. Howard, chief of the Bureau of Entomology, to have this indexing done in the Bureau, but it seems desirable that the committee be continued to make the necessary arrangements.

While it is not desired to make money on this index, it is very necessary that the returns from the sale of the publication be sufficient so as not to involve the Association too deeply from a financial standpoint. A plan has been suggested to offer the volume to members for a limited period at an advance price of \$4 per copy, about one month being given the members to take advantage of this opportunity, after which time the price will be increased. If we sell 250 copies, we will be able to handle the publication without embarrassing the treasury.

MR. G. W. HERRICK: From the figures submitted in the report, I presume an edition of 1,000 copies would require an outlay of about \$1,500. If all were sold, \$4,000 would be realized. I am wondering what would be done with the surplus funds. Of course it is improbable that we could sell 1,000 copies immediately. If the price could be made lower, I think more copies would be sold at once.

MR. E. P. FELT: I would like to set the price lower but do not feel that we ought to run the risk of involving the Association. We have figured conservatively on being able to sell 200 copies. Personally I am inclined to think we could sell as many at \$4 as at \$3.50. We cannot figure that every member will buy a copy, and there will probably be a large reserve stock left over from which the Association will not realize anything for a number of years.

A MEMBER: Would it not be a good idea for the committee to canvass the Association, addressing all the members as to whether they would subscribe at different prices and in this way get an idea as to the price that should be fixed.

SECRETARY A. F. BURGESS: In handling this matter, I think the clerical work should be cut down to a minimum. We believe that this publication can be ready for distribution early in March. If a man is notified that he can receive a copy at a reduced rate before a given date, he can place his order enclosing payment, and the whole matter is settled in a single transaction. I think this would work out very satisfactorily and will reduce the clerical labor to a minimum.

By vote of the Association the report of the committee was accepted  
\*and recommendations adopted.

VICE-PRESIDENT GEORGE A. DEAN: Inasmuch as Dr. Hewitt will probably be here tomorrow, the chair will appoint only one committee, that on auditing. As there is considerable work for this committee to do, it seems desirable that the appointment be made at once. I will therefore designate Mr. W. E. Britton and Mr. R. A. Cooley to take charge of the auditing.

Is there anything that should come up under the head of miscellaneous business?

SECRETARY A. F. BURGESS: At the last annual meeting a committee was appointed to consider the matter of arranging the time of meeting, and the program. Unfortunately this committee was not able to present a report at the last session. It was the sense of the meeting, however, that the Secretary arrange the program for this meeting after consultation with the secretary of the Entomological Society of America. Probably there is no one present who has looked over this program that does not realize that it is exceedingly crowded. This has been necessary in order to get all the papers included. If it is the wish of the Association to jam forty papers into two sessions, the Secretary can do it, but if we want more time, we must make arrangements to have it. I would like to see the matter considered by a committee at this meeting, so that the wishes of the Association may be complied with.

MR. T. J. HEADLEE: Some of us are very anxious to be able to attend the sessions of this Association and those of the Entomological Society of America, and we hoped that there would be no conflicts. There have been, however, at this meeting, and I do not think it possible to escape them. If there are any, it is a question of the survival of the fittest. The point made by the Secretary that he can jam forty papers into two sessions is an indication that the number of papers is so large that the time we would naturally use for coöperation with other Associations is taken up. I am in sympathy with the idea of making an effort to arrange the programs in harmony, and I think a committee should be appointed to take the matter up and report at a later session.

SECRETARY A. F. BURGESS: The program was arranged this year so that there would be no conflict in time between the meeting of the Entomological Society of America and this Association and its sections.

MR. W. A. RILEY: As long as this matter is bound to come up year after year, some settlement should be made, and I think a committee should consider the matter.

MR. W. E. BRITTON: I believe a committee should be appointed, and that the secretaries of the various sections should be members of the committee.

SECRETARY A. F. BURGESS: I would rather not be a member of the

committee, but think that the matter should be considered by a committee made up of members of the Association, so that a better arrangement can be made in the future.

MR. E. P. FELT: I do not believe we ought to excuse our Secretary from being a member of the committee inasmuch as he is familiar with the details in making up a program.

MR. J. G. SANDERS: I am a member of the Entomological Society of America and have a feeling that one of the difficulties experienced with their sessions is that they place no limit on the length of the papers. I have listened to papers which occupied 35 to 45 minutes and could not help feeling that the information could have been greatly condensed and much time saved. I believe the matter should be considered at this meeting.

It was voted that a committee of three be appointed to consider the matter and report at the last session.

SECRETARY A. F. BURGESS: I have a letter from Dr. Howard, secretary of the American Association for the Advancement of Science, stating that all members of our Association who are not members of that association can join before January 1, 1917, without payment of the entrance fee of \$5.

MR. J. J. DAVIS: Professor T. D. A. Cockerell brought up a matter at the meeting of the Entomological Society of America yesterday in regard to present conditions at the National Museum, and a committee was appointed to consider the matter of extending the entomological work in the National Museum. I believe all of our members are interested and I would therefore move that a committee of five be appointed to cooperate with the committee of the Entomological Society of America. It was voted that this committee be appointed.

VICE-PRESIDENT GEORGE A. DEAN: Is there any further business?

MR. R. A. COOLEY: I would like to bring up a matter in connection with the relation of our sections to the Association, as I think there is some difference of opinion among our members concerning it. The question of arranging sections on different activities should also be considered, and I believe a committee should be appointed to consider the matter.

It was voted that a committee of three be appointed to report at the final session.

VICE-PRESIDENT GEORGE A. DEAN: I will now call for the report of Mr. P. J. Parrott, who was our special representative at the 150th anniversary of Rutgers College.

REPORT OF DELEGATE TO THE ANNIVERSARY OF THE FOUNDING  
OF RUTGERS COLLEGE

The one hundred fiftieth anniversary of the founding of Rutgers College was celebrated at New Brunswick, New Jersey, October 13-15, 1916, inclusive. The opening session of Friday morning consisted of commemoration exercises, the chief feature of which was a most interesting historical address by Dr. W. H. S. Demarest, President of Rutgers College. The afternoon was largely devoted to the anniversary pageant, which was given at the college farm in the open air with a charming, picturesque natural setting. In this exercise scenes of note in the history of the college and city and symbolical representations of the various branches of learning were presented by citizens, members of the faculty, graduate and undergraduate students. While there was no claim of absolute historical accuracy, either in action or costume, the performance showed great merit and made a strong appeal to æsthetic imagination and appreciation. As perhaps some of the members of our Association may recall, photographs of several of the scenes were subsequently reproduced in a number of the leading magazines and illustrated journals. The principal events on Saturday morning were the formal reception of the delegates, conferring of honorary degrees and presentation of addresses on behalf of colleges and learned societies. The remainder of the day was given over to attractions of special interest to the students and alumni. Sunday morning was noteworthy for the anniversary sermon and service, commemorating the connection between Rutgers College and the Reformed Church in America. In the afternoon the celebration was appropriately concluded with vespers, which was a service of praise and thanksgiving for the long and useful life of the college.

Other features of the celebration that might be briefly mentioned were the large number of delegates, representing about one hundred twenty-six universities and colleges, nine theological seminaries and twenty-eight or more learned and patriotic societies; the number of splendid addresses by men distinguished for their achievements in the academic world; the most hospitable entertainment, and various social activities, as receptions, luncheons and banquets, which were of increasing interest and pleasure with the development of comradeship among the delegates. Finally, as a fitting close, for an economic entomologist, to the many satisfying experiences of so short a period, a most enjoyable afternoon was spent in an automobile ride, through the courtesy of Doctor and Mrs. Headlee, to the salt marsh area of Newark where opportunities were afforded to see first hand some aspects of the mosquito problem and the progress of mosquito control in New Jersey.

Time does not permit a more extended account and references to other interesting aspects of the celebration are therefore omitted. Such, in brief, were the principal events of the auspicious anniversary of Rutgers College, an institution notable for a long period of honorable and effective service, high ideals of scholarship, and the many gifted and devoted sons she has nurtured, who occupy positions of trust and leadership throughout the land. That the achievements of a century and a half are but the harbingers of more magnificent accomplishments in the years that are to come is, I am sure, the wish of the American Association of Economic Entomologists, which society it was my privilege and honor to represent.

PERCIVAL J. PARROTT,  
*Delegate.*

MR. T. J. HEADLEE: I trust the Association will allow me to express the appreciation of Rutgers College for the courtesy of sending a representative. The college appreciates it very sincerely, indeed.

VICE-PRESIDENT GEORGE A. DEAN: I will now appoint the following committees:

Committee to Consider Schedule of Meetings; W. C. O'Kane, A. F. Burgess and J. S. Houser.

Committee on Entomological Work at National Museum; J. J. Davis, E. P. Felt, R. L. Webster, Herbert Osborn and E. D. Ball.

Committee to Consider Relationship of Various Sections to the Association; R. A. Cooley, J. G. Sanders and E. F. Phillips.

On Friday morning, the following committees were appointed by President Hewitt:

Committee on Resolutions; George A. Dean, G. W. Herrick and F. L. Washburn.

Committee on Nominations; E. P. Felt, A. L. Quaintance and P. J. Parrott.

On Saturday morning in order to enable newly elected members of the Association to take advantage of the opportunity to become members of the American Association for the Advancement of Science at the reduced rate, the report of the committee on membership was presented.

#### REPORT OF THE COMMITTEE ON MEMBERSHIP

The committee on membership respectfully submits the following report:

The committee recommends:

1. That the Secretary be instructed to notify members who are in arrears for dues that unless the same are paid promptly, their names will be dropped from the roll.
2. That the following named persons be elected to associate membership:

H. E. Backus, North East, Pa.	Allen Bowie Duckett, Washington, D. C.
William J. Baerg, Ithaca, N. Y.	E. H. Dusham, State College, Pa.
John Wendell Bailey, Agricultural College, Miss.	Philip Garman, College Park, Md.
Arthur Challen Baker, Washington, D. C.	Louis G. Gentner, Madison, Wis.
Parker T. Barnes, Harrisburg, Pa.	Ernest Gram, Ithaca, N. Y.
G. E. Benschel, Oxnard, Cal.	Clyde Carney Hamilton, Ithaca, N. Y.
John W. Bradley, Melrose Highlands, Mass.	Dwight Isely, Washington, D. C.
W. L. Chandler, Ithaca, N. Y.	Dettmar Wentworth Jones, Melrose, Mass.
Royal N. Chapman, St. Paul, Minn.	Harry B. Kirk, Harrisburg, Pa.
Leroy Childs, Hood River, Ore.	J. L. E. Lauderdale, Baton Rouge, La.
Frank R. Cole, Washington, D. C.	A. L. Lovett, Corvallis, Ore.
George A. Coleman, University of California.	Arthur C. Mason, Gainesville, Fla.
Richard Thomas Cotton, Rio Piedras, P. R.	S. L. Mason, West Lafayette, Ind.
R. W. Doane, Stanford University, Cal.	T. F. McGhee, Tallulah, La.
Sepekerin M. Dohanian, West Somerville, Mass.	Charles W. Minott, Hudson, Mass.
	B. W. Moreland, Tallulah, La.
	Earl L. Morris, San José, Cal.
	Harold Morrison, Washington, D. C.
	George Franklin Moznette, Corvallis, Ore.